United States Department of the Interior
Fish and Wildlife Service
Ecological Services
Carlsbad Fish and Wildlife Office
2730 Loker Avenue West
Carlsbad, California 92008

In Reply Refer to: 1-6-01-F-1328.2

MAY 0 8 2001

Mr. Michael G. Ritchie, California Administrator
Federal Highway Administration
Department of Transportation
980 Ninth Street, Suite 400
Sacramento, CA 95814-2724

Re: Biological Opinion on the Proposed Operational Improvement Projects on Interstate 15 in San Diego County, California;.

Dear Mr. Ritchie:

This document transmits the Fish and Wildlife Service's (Service) biological opinion based on our review of the proposed Operational Improvement Projects on Interstate 15 (I-15) located in San Diego County, California, and its effects on the threatened coastal California gnatcatcher (*Polioptilla californica californica,* gnatcatcher) in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Critical habitat for the gnatcatcher was designated in 2000, however none occurs within the project boundaries and therefore it will not be addressed further. Your January 27, 2001, request for formal consultation was received on January 31, 2001.

This biological opinion is based on information provided in the November 3, 2000, and January 27, Biological Assessment, meetings, and other information available in our files. A complete administrative record of this consultation is on file at the Service's Carlsbad Fish and Wildlife Office.

Focused surveys for the endangered least Bell's vireo(*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*) detected neither species. A patch of *Plantago erecta*, a larval host plant for the endangered Quino checkerspot butterfly (*Euphydryas editha quino*, Quino), was observed just outside of grading limits on the southbound side of I-15, just south of State Route 56 (SR-56). No Quino were observed during protocol surveys. Suitable habitat for the endangered arroyo toad (*Bufo californicus*) is not currently present within the project area. Designated or proposed critical habitat for the above species does not occur within the project boundaries and therefore none will be adversely modified as a result of the proposed operational improvements project. For these reasons, the proposed operational improvements project is not likely to adversely affect the above species or adversely modify their respective proposed or designated critical habitats. Therefore, these species will not be addressed further in this Biological Opinion except in the Description of the Proposed Action.

CONSULTATION HISTORY

In 1999, several meetings took place between our office and Caltrans to discuss preliminary findings and discuss project review. In 2000, Caltrans and our office discussed project impacts and compensation in meetings and telephone conference calls. We received a draft Biological Assessment dated November 3, 2000, on November 7, 2000, followed by additional information on November 29, 2000. The details of the project were discussed in a January 17, 2001, meeting with Caltrans biologist Bob James at Carlsbad Field Office. On January 18, 2001, Bob James sent additional information regarding the Biological Assessment via e-mail. On January 31, 2001, we received a request for formal consultation. Field notes from Bob James were received on February 15, 2001.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The Service, Federal Highways, and Caltrans view the proposed action for which this Biological Opinion is written as a part of a larger action along the I-15 Corridor Project. Interstate highway improvement projects are often disjunct individual projects that, when pieced together, constitute a much larger single linear project. Repair and improvement work along an interstate corridor is generally conducted in finite, disjunct construction periods (and areas) to allow for minimum disturbance to the interstate's primary purpose of providing safe transportation. Each distinct project has environmental impacts associated with it that contribute to regional cumulative impacts associated with the improvement and upkeep of the interstate system Impacts associated with the I-15 Corridor Project will be addressed in the Cumulative Impacts section of this Biological Opinion. Due to the duration of the larger I-15 Corridor Project, and the need to stagger the work along the corridor, this Biological Opinion will analyze the impacts within a three year time frame associated with the proposed Operational Improvement Projects for three areas along I-15 between Mercy Road and Carmel Mountain Road. Impacts associated with these three areas will be compensated for by purchase of 86 acres of habitat near Lake Hodges. By rendering a Biological Opinion on the three Operational Improvements addressed in this document, temporal loss of habitat is minimized, and habitat that is near the impact areas can be secured for conservation to compensate for project impacts to coastal California gnatcatcher.

This Description of the Proposed Action will describe the larger I-15 Corridor Project briefly and then describe in detail the three projects within the Component Three Operational Improvements for which this Biological Opinion addresses.

The I-15 Corridor Project is composed of three (3) components:

1. Component One plans for bridge widening and either a Managed Lanes alternative or High Occupancy Vehicle Lanes alternative.

Bridge widening is proposed at Los Peñasquitos Creek, Green Valley Creek, and Lake Hodges. Timber pilings, cofferdams, and piling driving are planned and construction time is anticipated at nine months for Los Peñasquitos, one year for Green Valley and 18 months for Lake Hodges.

The Managed Lanes Alternative of Component One proposes four managed lanes in the freeway median of I-15 throughout the length of the I-15 Corridor. This alternative requires outside widening of the existing freeway lanes on at least one side and sometimes both. Some additional right-of-way will be required for temporary construction and drainage easements and noise barriers. A moveable barrier system is proposed so that the four lanes can be oriented in three different configurations depending upon traffic needs. Three moveable barrier machines would be needed. A maintenance facility is proposed in the I-15 median or adjacent, about 0.5 miles south of State Route-163 junction. Other important project features are bridge removal and reconstruction at Carroll Canyon Road, I-15/SR-56, Carmel Mountain Road, Duenda Road, Highland Valley Road, Via Rancho Parkway, and Del Lago Blvd. Direct access ramps will be constructed into the Managed Lanes at Hillery Avenue, Del Lago Blvd, and Hale Avenue. Up to 21 noise barriers are proposed throughout the I-15 Corridor. The final number will be determined later in the planning process. Potential impacts to CSS and gnatcatchers have been incorporated in the impact analysis (Table 2).

The High Occupancy Vehicle (HOV) Alternative of Component One proposes four lanes located in the freeway median separated from the main lanes by a painted buffer. This alternative also includes the same direct access ramps, bridge modifications, and noise barriers as the Managed Lanes Alternative.

2. Component Two plans for five Bus Rapid Transit Centers.

Transit Centers are proposed with the I-15 Corridor at Mira Mesa (Hillery Drive), Sabre Springs (off Evening Creek Road), Rancho Bernardo (off West Bernardo Road), Del Lago, and Escondido (from Hale Avenue)[1]. Direct Access Ramps are proposed with each of these Transit Centers. To date, the only biological resource identified that occur on these transit center sites are vernal pools present in the vicinity of Miramar College. These pools may support San Diego fairy shrimp (*Branchinecta sandiegonensis*). The Service will be consulted if impacts may affect listed species.

3. Component three plans for Operational Improvements.

Auxiliary/Added Lanes at seven locations (Table 1). Auxiliary lanes extend between entrances/exits, while "added lanes" continue through an interchange.

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[1] The Metropolitan Transit Development Board is the lead agency for all of the proposed transit centers, with the exception of Del Lago.

Table 1. Seven Proposed Auxiliary/Added Lane Projects in I-15 Corridor, Direction, and Kilopost Limits. Projects are listed from south (list top) to north (bottom). The three projects marked in bold type are considered the Proposed Action for this Biological Opinion.

Direction(s)	KP Limits	Street Location Limits
NB, SB	20.7 – 26.1	Miramar Way – Mira Mesa Blvd
NB, SB	**28.2 – 29.0**	**Mercy Rd – Poway Rd**
SB	**29.6 – 30.9**	**Rancho Peñasquitos Blvd – State Route 56**
NB, SB	**30.6 – 32.0**	**I-15 / State Route 56 Interchange**
NB, SB	31.4 – 35.2	Carmel Mt – Camino Del Norte
NB, SB	38.1 – 43.5	Camino Del Norte – Via Rancho Pkwy
NB, SB	46.7 – 49.6	Citracado Pkwy – Valley Pkwy

Interstate 15/ State Route 56 Interchange and Auxiliary Lanes Improvement:

The main features are a loop on-ramp (eastbound SR-56 to northbound [NB] I-15), retaining walls under the Ted Williams Parkway overcrossing, and a soundwall along NB I-15 and connector from southbound [SB] I-15 to westbound SR-56. In the north part, it is proposed to add one auxiliary lane NB from the NB Carmel Mountain Road off-ramp to the end of the existing truck climbing lane. In the SB direction, the proposal is to add one lane from the SB off-ramp to the existing fifth lane located just south of the I-15/SR-56 Interchange. Noise barriers will be included on both the north- and southbound sides adjacent to the highway shoulder north of SR-56/Ted Williams Parkway to Carmel Mountain Road, and adjacent to residences on the southbound side of I-15 near SR-56. Construction is scheduled to begin in December 2001 and take about one year.

Southbound Auxiliary Lane from State Route 56 to Rancho Peñasquitos Blvd:

An auxiliary lane would be extended about 500 meters (1,700 feet) from the southern end of the I-15/SR-56 Project southward to Rancho Peñasquitos Blvd. Construction is scheduled to begin in December 2001, and be completed within the schedule of the above project.

Auxiliary/Added Lanes from Mercy Road to Poway Road:

In the northbound direction, an additional lane would extend from Scripps Poway Parkway to the Rancho Peñasquitos Creek Bridge. The lane would continue from just northbound of the bridge to Ted Williams Parkway. The bridge across Rancho Peñasquitos Creek would be widened. An auxiliary lane would also extend from Rancho Peñasquitos Blvd to Mercy Road in the southbound direction. Noise barriers are proposed on the southbound side adjacent to the highway shoulder between Rancho Penasquitos Creek and just south of Mercy Road, as well as adjacent to residences just south of Rancho Penasquitos Blvd. Construction is proposed to begin in June 2002, with completion by December 2003.

Conservation Measures

The following conservation measures are proposed to minimize impacts to sensitive habitats and species:

4. Environmentally Sensitive Areas (ESA's) and Limited Use Areas (LUA's) will be designated on project plans. ESA designation will best ensure that no impacts occur outside of the project limits. LUA designation (e.g., equipment storage/staging) will also reduce impacts.

5. Erosion control measures will be incorporated, including use of San Diego sagewort at the Los Peñasquitos Creek Bridge. A Caltrans District Biologist will review the Plans, Specifications, and Estimate (PS&E) Package and attend the pre-job meeting with contractors and Caltrans Resident Engineer to explain mitigation requirements. A biologist will provide technical assistance as needed throughout the construction period. San Diego sagewort will be included in the erosion control seed mix, as recommended in the conceptual mitigation plan (Odgen 2000).

6. Impacted San Diego barrel cactus (*Ferocactus viridescens*) will be salvaged and transplanted in appropriate habitat as recommended in the conceptual mitigation plan (Odgen 2000).

7. To compensate for the three operational improvements described in the proposed action, approximately 92.71 acres of habitat was acquired west of I-15 on the north shore of Lake Hodges. The three parcels (Tax Assessor Parcel Nos. 272-111-16, -20, and 272-252-61) were purchased by Caltrans in February 2001. consisting of about 86 acres of coastal sage scrub (CSS) supporting gnatcatchers. There are also 6.2 acres of southern mixed chaparral habitat on the parcels. Cactus wrens (*Campylorhynchus brunneicapillus*), a California State Species of Special Concern, are also present on the parcels. It is likely these lands would be transferred to a land management agency in the future. Parcels Nos. 272-111-16, -20 are within the Multiple Habitat Planning Area of the City's Multiple Species Conservation Program Subarea Plan.

8. The middle parcel Nos. 272-11-20 has four recorded conservation easements totaling 5.46 acres. The Environmental Trust has agreed to manage this area in perpetuity as open space for biological conservation. These easements are clustered at the southern end of the parcel, and are not considered to significantly detract from use of the parcel as mitigation.

The following conservation measures are proposed to minimize incidental take of gnatcatchers:

9. On the three parcels being set aside to compensate for project impacts, there are about 81 acres of CSS, supporting nine pairs and three individual gnatcatchers. To offset adverse impacts to gnatcatchers, a total of 32.2 acres of CSS (a 2:1 ratio) and six gnatcatcher

territories (1:1 ratio) would be encumbered on the parcels for these three proposed projects. The remainder would be available as mitigation for other projects.

10. Vegetation removal, including clearing and grubbing, will be done between August 31 and February 1, outside of the gnatcatcher nesting season.

The proposed I-15 Operational Improvement Projects will have a major impact on a core California gnatcatcher population and a highly important north/south corridor that facilitates gnatcatcher dispersal. The following conservation measures are proposed to minimize the cumulative impacts of Federal Highways and Caltrans actions to gnatcatchers and sensitive biologic communities:

11. To offset cumulative impacts from the proposed I-15 Operational Improvement Projects, and other future Caltrans and Federal Highways projects in San Diego County, to coastal sage scrub vegetation and the California gnatcatcher, Caltrans and/or Federal Highways may establish a mitigation bank with regional conservation value for the California gnatcatcher. The mitigation bank shall be used to offset total project impacts such that an overall net benefit is achieved for conservation of gnatcatchers and coastal sage scrub vegetation.

12. The mitigation bank shall comply with all Federal Highways and State of California Mitigation Banking policy.

13. The mitigation bank or other acquired land must be located in core gnatcatcher habitat (as defined by the Natural Community Conservation Planning Program and Multiple Species Conservation Program (MSCP) or the Multiple Habitat Conservation Program (MHCP)), and shall provide a significant contribution to regional conservation planning efforts.

14. The mitigation bank or other acquired land site shall have high biological value in the San Diego region for target species and habitats. At a minimum, the site(s) should mitigate at no less than in-kind for the amount and quality of coastal sage scrub habitat to support an equal or greater number of gnatcatcher pairs than is proposed to be impacted.

15. The site shall consist of predominantly high or very high value habitat for migratory birds and other rare animal and plants as evaluated by regional conservation planning efforts and may support wetland habitats.

16. The site shall have a high area-perimeter ratio to minimize edge effects, as well as be connected to other preserved lands.

17. Preservation should be consistent with regional conservation plans. The site should be considered by the Service and California Department of Fish and Game to be at risk of future activities that reduce the biological values that contribute to the MSCP or MHCP conservation planning efforts.

18. The mitigation bank lands shall be acquired, preserved, and managed consistent with a Mitigation Bank Implementing Agreement signed by Caltrans, Federal Highways (if applicable), the Service, and the California Department of Fish and Game, prior to initiation of project impacts for the I-15 Managed/HOV Lanes Projects.

19. A land management agency should be prepared to accept the land and have the fiscal and human resources to monitor and manage it properly in perpetuity.

20. The mitigation bank lands should be a good candidate to manage human access and prevent non-native species establishment.

21. There should not be incompatible management constraints (e.g., easements).

STATUS OF THE SPECIES/CRITICAL HABITAT

Listing Status

The Service listed the coastal California gnatcatcher as threatened on March 30, 1993 (*Federal Register* 58: 16742). Critical habitat was finalized October 24, 2000 (*Federal Register* 65: 63681).

Species Description

The coastal California gnatcatcher is a small (length: 11 centimeters; weight: 6 grams), long-tailed member of the old-world warbler and gnatcatcher family *Sylviidae* (American Ornithologists' Union 1998). The bird's plumage is dark blue-gray above and grayish-white below. The tail is mostly black above and below. The male has a distinctive black cap which is absent during the winter. Both sexes have a distinctive white eye-ring.

The coastal California gnatcatcher is one of three subspecies of the California gnatcatcher (*Polioptila californica*) (Atwood 1991). Prior to 1989, the California gnatcatcher was classified as a subspecies of the Black-tailed gnatcatcher (*Polioptila melanura*). Atwood (1980, 1988) concluded that the species was distinct from *P. melanura*, based on differences in ecology and behavior. Recent mitochondrial DNA sequencing confirmed the species-level recognition of the California gnatcatcher (Zink and Blackwell 1998).

Distribution

Gnatcatchers occur on coastal slopes in southern California, ranging from southern Ventura southward through Palos Verdes Peninsula in Los Angeles County through Orange, Riverside, San Bernardino and San Diego Counties into Baja California to El Rosario, Mexico, at about 30 degrees north latitude (Atwood 1991). In 1990, Atwood reported that ninety-nine percent of all gnatcatcher locality records occurred at or below an elevation of 300 meters (m) (984 feet (ft)). Since that time, additional data collected at higher elevation shows that this species may occur as

high as 912 m (3,000 ft) and that more than 99 percent of the known gnatcatcher locations occurred below 770 m (2,500 ft) (U.S. Fish and Wildlife Service 2000).

Habitat Affinities

Gnatcatchers typically occur in or near coastal sage scrub habitat. Coastal sage scrub is patchily distributed throughout the range of the gnatcatcher, and the gnatcatcher is not uniformly distributed within the structurally and floristically variable coastal sage scrub community. Rather, the subspecies tends to occur most frequently within California sagebrush (*Artemisia californica*)-dominated stands on mesas, gently sloping areas, and along the lower slopes of the coast ranges (Atwood 1990). An analysis of the percent gap in shrub canopy supports the hypothesis that gnatcatchers prefer relatively open stands of coastal sage scrub (Weaver 1998). The gnatcatcher occurs in high frequencies and densities in scrub with an open or broken canopy while it is absent from scrub dominated by tall shrubs and occurs in low frequencies and densities in low scrub with a closed canopy (Weaver 1998). Territory size increases as vegetation density decreases and with distance from the coast, probably due to food resource availability.

Gnatcatchers also use chaparral, grassland, and riparian habitats where they occur adjacent to sage scrub (Campbell *et al.* 1998). The use of these habitats appears to be most frequent during late summer, autumn, and winter, with smaller numbers of birds using such areas during the breeding season. These non-sage scrub habitats are used for dispersal, but data on dispersal use are largely anecdotal (Campbell *et al.* 1998). Linkages of habitat along linear features such as highways and power-line corridors may be of significant value in linking populations of the gnatcatcher (Famolaro and Newman 1998). Although existing quantitative data may reveal relatively little about gnatcatcher use of these other habitats, these areas may be critical during certain times of year for dispersal or as foraging areas during drought conditions (Campbell *et al.* 1998). Breeding territories have also been documented in non-sage scrub habitat. Campbell *et al.* (1998) discuss likely scenarios explaining why habitats other than coastal sage scrub are used by gnatcatchers including food source availability, dispersal areas for juveniles, temperature extremes, fire avoidance, and lowered predation rate for fledglings.

Critical Habitat

On October 24, 2000, the Service published the final determination of critical habitat for the gnatcatcher (*Federal Register* 65: 63680), including 207,868 hectares (ha) (513,650 acres (ac)) of Federal, state, local, and private land in Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties. Primary constituent elements for the gnatcatcher are those habitat components that are essential for the primary biological needs of foraging, nesting, rearing of young, intra-specific communication, roosting, dispersal, genetic exchange, or sheltering (Atwood 1990). Primary constituent elements are provided in (1) undeveloped areas, including agricultural lands, that support or have the potential to support, through natural successional processes, various types of sage scrub, or (2) undeveloped areas that support chaparral, grassland, or riparian habitats where they occur proximal to sage scrub and where they may be utilized for

the biological needs of dispersal and foraging, and (3) undeveloped areas, including agricultural areas, that provide or could provide connectivity or linkage between or within larger core areas, including open space and disturbed areas that may receive only periodic use.

Life History

The California gnatcatcher is primarily insectivorous, nonmigratory, and exhibits strong site tenacity (Atwood 1990). Diet deduced from fecal samples resulted in leaf- and plant-hoppers and spiders predominating the samples. True bugs, wasps, bees, and ants were only minor components of the diet (Burger *et al.* 1999). Gnatcatcher adults selected prey to feed their young that was larger than expected given the distribution of arthropods available in their environment. Both adults and young consumed more sessile than active prey items (Burger *et al.* 1999).

The California gnatcatcher seems to become highly territorial by late February or early March each year, as males become more vocal during this time period (Mock *et al.* 1990). In southwestern San Diego County the mean breeding season territory size ranged from 5 to 11 ha (12 to 27 ac) per pair and non-breeding season territory size ranged from 5 to 17 ha (12 to 42 ac) per pair (Preston *et al.* 1998). During the nonbreeding season, gnatcatchers have been observed to wander in adjacent territories and unoccupied habitat increasing their home range size to approximately 78 percent larger than their breeding territory (Preston *et al.* 1998).

The breeding season of the gnatcatcher extends from mid-February through the end of August, with the peak of nesting activity occurring from mid-March through mid-May. The gnatcatcher's nest is a small, cup-shaped basket usually found 0.3 to 1 m (1 to 3 ft) above the ground in a small shrub or cactus. Clutch sizes range between three and five eggs, with the average being four. Juvenile birds associate with their parents for several weeks (sometimes months) after fledging (Atwood 1990). Nest building begins in mid-March with the earliest recorded egg date of March 20 (Mock *et al.* 1990). Post-breeding dispersal of fledglings occurs between late May and late November. Nest predation is the most common cause of nest failure (Grishaver *et al.* 1998). Gnatcatchers are persistent nest builders and often attempt multiple broods, which is suggestive of a high reproductive potential. This is, however, typically offset by high rates of nest predation and brood parasitism (Atwood 1990). Nest site attendance by male gnatcatchers was determined to be equal to that of females for the first nest attempt and then decline to almost a third of female nest attendance for later nesting attempts (Sockman 1998).

Gnatcatchers typically live for two to three years, although ages of up to five years have been recorded for some banded birds (Dudek and Associates 2000). Observations indicate that gnatcatchers are highly vulnerable to extreme cold, wet weather (Mock *et al.* 1990). Predation occurs in greater proportion in the upper and lower third of the nest shrub. Predation is lower in nests with full clutch sizes (Sockman 1997). Potential nest predators are numerous, and include snakes, raccoons, and corvids (Grishaver *et al.* 1998). The California gnatcatcher also is known to be affected by nest parasitism of the brown-headed cowbird (*Molothrus ater*). Nest parasitism apparently has resulted in earlier nesting dates of the gnatcatcher which may help compensate for the negative effect of parasitism (Patten and Campbell 1998). However, the gains in nest success

from decreased nest parasitism appear to be negated by increased nest abandonment due to predation before cowbirds have migrated into an area (Braden *et al.* 1997).

The natal dispersal, for a nonmigratory bird, such as the gnatcatcher, is an important aspect of the biology of the species (Galvin 1998). The mean dispersal distance of gnatcatchers banded in San Diego County is reported at less than 3 kilometers (km) (1.9 miles (mi)) (Bailey and Mock 1998). Although the mean dispersal distances that have been documented above are relatively low, dispersal of juveniles is difficult to observe and to document without extensive banding studies. Therefore, it is likely that the few current studies underestimate the gnatcatcher's typical dispersal capacity (Bailey and Mock 1998). Juvenile gnatcatchers are apparently able to traverse highly man-modified landscapes for a least short distances (Bailey and Mock 1998). Natural and restored coastal sage scrub habitat along highway corridors is used for foraging and nesting by gnatcatchers and may serve important dispersal functions (Famolaro and Newman 1998). Typically, however, the dispersal of juveniles requires a corridor of native vegetation which provides foraging and cover opportunities to link larger patches of appropriate sage scrub vegetation (Soule 1991). These dispersal corridors may facilitate the exchange of genetic material and provide a path for recolonization of areas from which the species has been extirpated (Soule 1991, Galvin 1998).

Population Trend

The gnatcatcher was considered locally common in the mid-1940's, but by the 1960's this subspecies had declined substantially in the United States owing to widespread destruction of its habitat (Atwood 1990). By 1980, Atwood (1980) estimated that no more than 1,000 to 1,500 pairs remained in the United States. In 1993, at the time the gnatcatcher was listed as threatened, the Service estimated that approximately 2,562 pairs of gnatcatchers occurred in the United States. In 1997, the total number of gnatcatchers in the United States was estimated at 2,899 pairs with two-thirds occurring in San Diego County (U.S. Fish and Wildlife Service 1996), after subtracting out all gnatcatcher pairs authorized for take under Habitat Loss Permits, approved Natural Community Conservation Plans, Habitat Conservation Plans, and section 7 consultations. These population estimates were intended to represent a coarse approximation of the number of gnatcatchers in southern California. Confidence intervals have not been calculated for these estimates and therefore, we can not be sure of their precision.

Threats

The loss, fragmentation, and adverse modification of habitat are the principal reasons for the gnatcatcher's federally threatened status (*Federal Register* 58: 16742). The amount of coastal sage scrub available to gnatcatchers has continued to decrease during the period after the listing of the species. It is estimated that up to 90 percent of coastal sage scrub vegetation has been lost as a result of development and land conversion (Westman 1981a, 1981b, Barbour and Major 1977), and coastal sage scrub is considered to be one of the most depleted habitat-types in the United States (Kirkpatrick and Hutchinson 1977, O'Leary 1990). The fragmentation of habitat may artificially increase populations in adjacent preserved habitat; however, these population

surpluses may be lost in subsequent years due to crowding and lack of resources (Scott 1993). In addition, agricultural use, such as grazing and field crops, urbanization, air pollution, and the introduction of non-native plants have all had an adverse impact on extant sage scrub habitat. A consequence of urbanization that is contributing to the loss, degradation, and fragmentation of coastal sage scrub is an increase in wildfires due to anthropogenic ignitions. High fire frequencies and the lag period associated with recovery of the vegetation may significantly reduce the viability of affected subpopulations (Dudek and Associates 2000). Furthermore, nest-parasitism by the brown-headed cowbird (Unitt 1984) and nest predation threaten the recovery of the gnatcatcher (Atwood 1980, Unitt 1984).

ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR §402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area. Also included in the environmental baseline are the anticipated impacts of all proposed Federal projects in the action area that have undergone section 7 consultation, and the impacts of State and private actions which are contemporaneous with the consultation in progress.

I-15 traverses south to north across gnatcatcher habitat in San Diego and Riverside Counties. In the action area, I-15 bisects an important east-west strip of CSS habitat. This linear stretch of CSS is within the Multiple Species Conservation Program's (MSCP) Multiple Habitat Planning Area and represents one of the largest continuous blocks of habitat in the region. This large patch of habitat serves as a major east-west corridor for wildlife, and the area includes core gnatcatcher populations. Lands to both the east and west of the project area have been planned as preserves in both the City and County of San Diego MSCP Subarea Plans. To the west of the proposed project is permanent open space for the 4-S Ranch totaling 1,877 acres, and the Lake Hodges Segment of the City of San Diego Cornerstone Lands. To the east of the proposed project are the Hodges East Segment of the City of San Diego Cornerstone Lands, and unincorporated lands in the Metro/Lakeside/Jamul Segment of the County's Subarea plan.

The preservation of the lands proposed as mitigation (as described in conservation measure one in the Description of the Proposed Project) contribute to the conservation efforts of the City and County of San Diego to preserve sensitive habitats in the Lake Hodges area. In addition, the purchased lands may contribute to maintaining gnatcatcher demographic and genetic diversity between core populations in San Diego and Riverside Counties along the I-15 cooridor.

Project specific field studies were conducted by Caltrans biologists and Odgen Environmental (and their sub-consultant biologists) from March 1999 to May 2000. Caltrans biologists conducted vegetation mapping from Caltrans Highway Inventory Aerials (1:24,000, black and white, September 1997). Focused gnatcatcher (1999) and Quino surveys (Spring 2000) were done by Robert James (Fish and Wildlife Service Permit No. TE003269-2), in accordance with the latest protocol guidance.

EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action, that will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

A total of 16.1 acres of coastal sage scrub (CSS) habitat (15 habitat patches) and six territories of coastal California gnatcatchers (*Polioptila californica californica* = gnatcatcher) (two pairs and four individuals) would be affected by construction of the three operational improvements bolded in Table 2. There would be direct loss of habitat likely used by gnatcatchers for breeding, foraging, and sheltering in these areas. The following paragraphs describe the impacts by project feature.

A pair northeast of the I-15/SR-56 Interchange and an individual to the southwest were observed in the direct impact areas for the I-15/SR-56 Interchange and Auxiliary Lane Project (i.e., two territories). A total of 10 CSS habitat patches (consisting of 10.3 acres) would be impacted by construction of the three operational improvements bolded in Table 2. Three of the patches total 8.3 acres (80% of the impact) and are of good habitat quality. The remaining seven areas, totaling 2.0 acres, are within ramp ovals or adjacent to the pavement.

The Auxiliary/Added Lanes from Mercy Road to Poway Road would impact four CSS habitat patches (3.5 acres), supporting three gnatcatcher territories (two on the southbound side, the third on the northbound side). The first patch (0.9acres) is on the northbound side, just north of Poway Road. The habitat quality is fair, with sparse shrub cover, compared to other habitat patches in the area. The remaining areas, all of good quality (fairly dense CSS), are on the southbound side (0.8 acres just north of Los Peñasquitos Creek) and two areas on the slope just south of the Creek (0.8 and 1.0 acres respectively).

The Southbound Auxiliary Lane from State Route 56 to Rancho Peñasquitos Blvd, would impact a single area of CSS habitat (2.2 acres) observed to be used by a pair of gnatcatchers. There would also be direct loss of habitat likely used by gnatcatchers for breeding, foraging, and sheltering in these areas. The shrub cover is dense California sagebrush (*Artemisia californica*) and flat-top buckwheat (*Eriogonum fasciculatum*) and of good quality with few non-native species present.

Planned transportation facilities in the I-15 Corridor with probable Federal involvement that will impact CSS and/or gnatcatchers are listed below in Table 2. Since the biological impacts for all the I-15 Corridor projects will be substantially greater than just the three "operational" projects, the mitigation would need to be correspondingly greater to reflect these associated biological values, and should have increased regional benefit to mitigate for cumulative impacts.

Table 2. I-15 Corridor Project Information and Impacts, by Proposed Project.
Note: The three proposed projects are bolded.

Proposed Projects	CSS (acres)	CSS areas impacted	[6]CAGN territories (pairs, singles)	Planned Construction Dates
[1]ML/HOV Phase 1	12.0	6	2 (2s)	10/2003 - 12/2005
[2]ML/HOV CDN-VR	23.5	18	9 (8p, 1s)	10/2003 - 12/2005
[3]ML/HOV Phase 2	0.2	1	-	2006+
[4]ML/HOV Phase 3	3.4	4	3 (3p)	2006+
[5]ML/HOV BTM Bridge	4.1	1	1 (1s)	10/2003 - 12/2005
ML/HOV Subtotal	43.2	30	15 (11p, 4s)	-
I-15 / SR-56 Interchange	**10.3**	**10**	**2 (1p, 1s)**	**8/2002 - 2/2004**
Carmel Mt Road	0.8	1	-	12/2001 - 12/2002
SR-56 to Rancho Peñasquitos Blvd	**2.2**	**1**	**1 (1p)**	**8/2002 - 2/2004**
Poway to Mercy Road	**3.5**	**4**	**3 (3s)**	**7/2003 - 12/2004**
Miramar Way to Mira Mesa Blvd	5.0	3	-	2/2004- 2/2004
Operational Project Subtotal	21.8	19	6 (2p, 4s)	-
TOTAL	65.0	49	21 (13p, 8s)	-

[1]Managed Lanes/High Occupancy Vehicle Lanes from just south of I-15/SR-56 Interchange to Centre City Parkway (central phase)
[2]An operational project between Camino Del Norte to Via Rancho Parkway planned to be built concurrent with ML/HOV Phase 1
[3]From Centre City Parkway to SR-78 (northern phase)
[4]From just south of SR-163 to just south of SR-56 (southern phase)
[5]Barrier Transfer Machine
[6]Coastal California Gnatcatcher

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.
The majority of activities anticipated to affect gnatcatchers within the foreseeable future are local urban development projects with no Federal involvement. The conservation of gnatcatchers in the United States is dependent on both the 4 (d) special rule, established at the time of listing, and multi-species Habitat Conservation Plans such as the MSCP, and the Multiple Habitat Conservation Program (MHCP). The 4 (d) rule recognized the State's Natural Community Conservation Planning (NCCP) Program, and several local governments' ongoing multi-species conservation planning efforts that intend to apply Act standards to activities affecting the gnatcatcher. Under the special rule, incidental take of the gnatcatcher by land-use activities

addressed in an approved NCCP Plan would not be considered a violation of section 9 of the Act, provided that the Service determined that the NCCP Plan meets the issuance criteria for an "incidental take" permit, pursuant to section 10(a)(2)(B) of the Act and 50 CFR 17.32(b)(2). Ultimately, conservation of the gnatcatcher is dependent upon implementation of the special rule and HCPs working in concert with conservation on federal lands. Therefore cumulative effects are expected to be minimal with the proper implementation of established conservation strategies.

CONCLUSION

After reviewing the current status of the gnatcatcher, the environmental baseline for the action area, the effects of the proposed operational improvements, and the cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the gnatcatcher, and is not likely to destroy or adversely modify designated critical habitat. The Service reached this conclusion for the following reasons:

1) The majority of the CSS habitat impacted is of medium to low quality. Impacted habitats are small oval, or linear, disjunct patches which have high perimeter to area ratios. The majority of impacts will take only portions of gnatcatchers' territories, and this habitat removal will occur outside the breeding season.

2) Impacts to gnatcatchers will be offset by the conservation of occupied habitat inside the Multiple Habitat Planning Area boundary. The CSS which would be preserved is of medium to high quality, occurs in a contiguous habitat patch, connects to other preserved lands, exhibits a low perimeter to area ratio, and will be managed for long-term conservation of the site.

3) To offset cumulative impacts from the proposed I-15 Operational Improvements Projects, Caltrans would establish a mitigation bank or conservation area of regional importance to gnatcatcher populations.

4) Impacts to gnatcathers will be minimized through the implementation of Best Management Practices, such as delineation of Environmentally Sensitive Areas and Limited Use Areas.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Harass is

defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by Federal Highways and Caltrans so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. Federal Highways and Caltrans have a continuing duty to regulate the activity that is covered by this incidental take statement. If Federal Highways and Caltrans fail to assume and implement the terms and conditions or (2) fail to require the applicant to adhere to the terms and conditions of this incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, Federal Highways and Caltrans or the applicant must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement. [50 CFR §402.14(i)(3)]

AMOUNT OR EXTENT OF TAKE

Based on Service protocol surveys of the project footprint, the Service anticipates one individual could be harmed as a result of loss of habitat resulting in a significant reduction in the individual's ability to forage. In addition, seven gnatcatchers are expected to be harassed through the loss of small amounts of habitat outside the breeding season which would require the individuals to shift territories.

The Service will not refer the incidental take of any migratory bird or bald eagle for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 668-668d), if such take is in compliance with the terms and conditions (including amount and/or number) specified herein.

EFFECT OF THE TAKE

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measure are necessary and appropriate to minimize take of gnatcatchers:

1. The Federal Highways Administration and Caltrans shall adhere to the project description and conservation measures set forth in this Biological Opinion.

2. The Federal Highways Administration and Caltrans shall implement best management practices during construction in order to minimize impacts to gnatcatcher habitat and thereby minimize the amount of take anticipated.

3. The Federal Highways Administration and Caltrans shall use local, endemic plant and seed stock for revegetation efforts resulting from the proposed project. Revegetation efforts shall be intended to recreate the impacted native community. This shall apply to all areas which are temporarily cleared, graded or otherwise adversely impacted by the proposed project. Areas between main lanes of the freeway and ramps, and inside ramp ovals, may be seeded or replanted with non-invasive ornamental plants.

4. To offset impacts from the proposed I-15 Operational Improvement Projects, and other future Caltrans and Federal Highway projects in San Diego County, to coastal sage scrub vegetation and the California gnatcatcher, Caltrans and/or FHWA shall establish a mitigation bank with regional conservation value for the California gnatcatcher.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, Federal Highways and Caltrans must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

The Federal Highways and Caltrans shall implement reasonable and prudent measure one through the following terms and conditions:

1.1 The Federal Highways Administration and Caltrans shall implement conservation measures set forth in the project description portion of this Biological Opinion.

The Federal Highways and Caltrans shall implement reasonable and prudent measure two through the following terms and conditions:

2.1 The project work area, consistent with that described in the project description, will be delineated with plastic orange fencing in the field before construction, and a map depicting the project work area will be provided to the construction crews. Construction crews will be educated as to the importance of containing impacts within the project

delineation boundary. Environmentally Sensitive Areas, and Limited Use Areas shall be clearly marked by fencing on site and clearly shown and labeled on the map depicting the project work area. Before construction begins, the Service shall be provided with a copy of the project work area map and education materials presented to the construction crews.

2.2 The Service shall be allowed to access and inspect the project site for compliance with the proposed project description and with the terms and conditions of this biological opinion. Any habitat destroyed that is not in the identified project footprint should be disclosed immediately to the Service for possible reinitiation of consultation. Compensation for such habitat loss will be requested at a minimum ratio of 5:1.

2.3 Before construction begins, a storm water prevention plan (SWPP) shall be developed and implemented to minimize erosion. The Service shall be notified when this plan is developed, and shall be provided with a copy upon request.

The Federal Highways and Caltrans shall implement reasonable and prudent measure three through the following terms and conditions:

3.1 All cut and fill slopes, or other areas which have been cleared of vegetation, shall be seeded or planted with appropriate native, local stock from the immediate area. No exotic, non-native plants shall be used in any portion of this project. The seed list, or planting pallet, as well as revegetaion and monitoring plans, shall be submitted to the Service for approval prior to any revegetation efforts. Areas between main lanes of the freeway and ramps, and inside ramp ovals, may be seeded or replanted with non-invasive ornamental plants.

The Federal Highways and Caltrans shall implement reasonable and prudent measure four through the following terms and conditions:

4.1 Federal Highways and Caltrans shall work in collaboration with the Service and California Fish and Game to identify possible mitigation bank locations. Within three months of this opinion, these parties shall meet to discuss possible mitigation bank site locations.

4.2 Within six months of this opinion, a mitigation site, or sites, shall be identified and agreed upon by Federal Highways, Caltrans, the Service and California Fish and Game. A description of the property, and its conformance with regional conservation planning efforts (such as the MSCP, MHCP), shall be provided to the Service and California Fish and Game. This deadline may be extended with written consent of the Service.

4.3 Within nine months of this opinion, a land management agency shall be identified to accept the land and have the fiscal and human resources to monitor and manage it properly in perpetuity. This land management agency shall be subject to the approval of

the Service and California Fish and Game. This deadline may be extended with written consent of the Service.

4.4 Within one year of this opinion, a draft Mitigation Bank Implementing Agreement shall be in review by Caltrans, Federal Highways (if applicable), the Service, and the California Department of Fish and Game. This deadline may be extended with written consent of the Service.

4.5 Prior to initiation of project impacts for the I-15 Managed/HOV Lanes Project, the final Mitigation Bank Implementing Agreement shall be signed by Caltrans, Federal Highways (if applicable), the Service, and the California Department of Fish and Game .

The Service's Carlsbad Office is to be notified within three working days should any endangered or threatened species be found dead or injured during this project. Notification must include the date, time, and location of the carcass, and any other pertinent information. Dead animals may be marked in an appropriate manner, photographed, and left on-site. Injured animals should be transported to a qualified veterinarian. Should any treated animals survive, the Service should be contacted regarding the final disposition of the animals. The Service contact person is Bill Ostheimer and he may be contacted at the letterhead address or at (760) 431-9440.

The Service believes that no more than one gnatcatcher will be harmed and seven harassed as a result of the proposed action. The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans or to develop information.

1. In an effort to assist with regional conservation, Federal Highways and Caltrans should develop guidelines for planting road cut and fill areas with local endemic species. The Service invites Federal Highways and Caltrans to informal discussions of potential cooperative efforts to ensure the continuation of coastal sage scrub and locally endemic plants along highway corridors.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the I-15 Operational Improvements at and near the I-15/SR 56 Interchange as outlined in the January 27, 2001, initiation package. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation. If you have any questions or concerns about this biological opinion, please contact Bill Ostheimer of my staff at (760) 431-9440.

Sincerely,

Nancy Gilbert

Nancy Gilbert
Assistant Field Supervisor

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